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The affair was a nine days' wonder, and doubtless afforded to the caricaturist of the period opportunity for productions such as the cartoons which are reproduced here.

In conclusion, I desire to express my indebtedness to Mr William Jones, Resident Librarian, Medical Institution, for help in tracing some of the actors in this story.

## FRÈRE JACQUES.

By ROBERT E. KELLY, M.D., B.Sc., F.R.C.S.

When we take up any old volume of surgery, there is one thing that strikes us most forcibly, and that is the great dissimilarity of method between mediæval and present-day writers.

If, when tired of the cut-and-dried facts of modern works, we look up some dusty volume of forgotten surgical lore, we can discover records that will amuse, cases that may instruct, and histories as fascinating as many enthralling romances.

Two of the most interesting surgical works I know are Astley-Cooper's *Clinical Lectures* and John Bell's *Principles of Surgery*, which were both published about the beginning of the last century. In the latter you may read at your leisure what I can only imperfectly outline in this paper, the life-work and history of Frère Jacques.

As a surgeon he presented the most extraordinary figure. An itinerant quack, he travelled through every European country with the exception of our own, claiming inspiration for his skill and accepting no rewards for his services.

In an operative experience of some twenty years, it is estimated that he cut some five thousand persons for stone. Nevertheless, in spite of his reputation and the notoriety he attained, he was allowed to die in poverty in his native town.

The operation of lithotomy was such an integral factor in his career that I will first of all give a slight sketch of its history.

The operation of lithotomy is perhaps one of the oldest operations known. Although there is some doubt as to whether the ancients ever intentionally used a solid sound for the purpose of diagnosing a stone in the bladder, yet they could hardly have been unconscious of the grating sensation of the stone when touched by their metal catheters, and we have several references in the classics to the manœuvre of pushing back, by means of the catheter, a stone impacted in the urethra. They were, however, perfectly well aware of the operation for removing the stone. In the Hippocratic writings, when a physician took his oath, he bound himself by solemn vows never actually to perform lithotomy, but to leave such menial work to the professional lithotomists, and Celsus described the operation so minutely that for the next few centuries the operation was called Lithotomia Celsiana. So common, indeed, must have been the operation that Celsus referred to one, Ammonius, surnamed the lithotomist, who, when the stone was too large to be easily removed without injuring the neck of the bladder, split the stone with a chisel, and removed it piecemeal. Surely the first reference to lithotripsy.

This operation of Celsus remained exactly as he described it for the next sixteen hundred years, and, from the few instruments used in its performance, was known as the lithotomy by the apparatus minor, in contradistinction to that known as the lithotomy by the apparatus major, of which I shall speak a little later on.

The patient was placed in the lithotomy position, and held there by strong assistants. The stone was felt by passing two fingers of the left hand in the rectum, and firmly pressed down by them on to the perineum. A transverse incision was then made between the rectum and the scrotum until the stone was reached, when, after cutting all the structures overlying it, the stone was either shot by the pressure above it on to the lap of the operator, or was extracted with a scoop.

During the latter part of the seventeenth century the opera-

tion, as well as its exponents, seems to have fallen into disrepute. This indeed might be said of most operations, for they were performed almost entirely by quacks. These itinerant practitioners, journeying from town to town, cut for stone, operated for rupture, and removed wens: in return for which services, in addition to the usual fees, their patients presented them with glowing testimonials. These, together with their museum of specimens, constituted the major part of their stock-in-trade.

Their popularity with the public was counterbalanced by the contempt in which they were held among the recognised surgeons, who frequently inveighed against them with the utmost malice. Among the more notorious of these quacks was Le Raoues, who appeared in the south of France about the year 1676. He performed the operation of Celsus with some modification of incision. Instead of cutting transversely, he made a lunated incision with the horns pointing to the left hip and entirely on the left side of the perineum. The success of this method was undoubted; but, instead of meeting with well-merited recognition, both the operator and operation were derided by the physicians of Paris in the most scathing terms. Drelincourt sarcastically remarked that Le Raoues was no doubt able to predict not only the size but also the colour of the stone, and Collot further accused him of secreting a stone up his sleeve. It is interesting to note that in later years when the elder Collot was cut for stone by his son, similar accusations were brought against them both by their rivals. As Bell remarks, "Even-handed justice was in this most just, commending the ingredients of their poisoned chalice to their own lips."

This intense jealousy, fostered by the success of the Celsian operation in the hands of the itinerant lithotomists, was also partly due to the fact that the regular surgeons used a more complicated operation. This was the lithotomy by the "apparatus major." They had found a saying of Hippocrates that wounds of the membraneous parts were mortal, and,

neglecting the dictum of Celsus that "it was better to cut than to dilate," they expended their energies in devising an operation to bring confusion upon their rivals. Their dilating instruments, which were calculated to impress the great, struck the patients with fear, and the spectators with dismay. A sound having been passed into the bladder, the membranous urethra was opened by a lateral incision, and a probe passed into the bladder and the staff withdrawn. The rest of the operation was merely a gradual and forceful dilatation. After the probe came the "conductors," two long bars of metal hinged together inside the bladder. They were gradually forced apart until the wound was capable of taking the "dilator," a sort of enlarged glove stretcher. After further dilatation the forceps were introduced and the stone removed.

This operation, painful as it must have been in the absence of any anæsthetic, was invented by Joannes de Romanis of Cremona, who, however, has not left any description of it. It was grandiloquently described by Marianus Sanctus Barolitanus, and is therefore sometimes known as the Marian operation.

His description is in the strain of poetic metaphor. "The barber's razor, friendly reader, with which a stubborn and rebellious beard is subdued,—which mows down millions of hairs at each remorseless stroke; Look but at the aperiens, how it gapes with desire when the conductors have made way for its approaching; and the forceps vociferating for help and raging for the stone."

Such high-sounding descriptions of the operation did not detract from its horrors. The conductors often pierced the fundus of the bladder, the stone disappeared through the rent, and the forceps brought down omentum or bowel. The rectum was sometimes spilt, and the wound rarely, if ever, healed. In truth in four out of five cases it remained fistulous for life. The surgeons were in the habit of using a cannula, ostensibly to keep the wound open, but really because they could not heal it, in much the same way as the older surgeons

allowed the arteries of an amputated limb to spurt to prevent plethora, the reason, however, being that they could not stop the bleeding.

But, apart from its complications, this operation of the apparatus major was an extremely fatal one even in the hands of the greatest surgeons of the day. As late as in the five years 1731–1735 in the Hospital of La Charité 71 patients were cut for stone, and 38 died.

When we consider this awful mortality, the lingering tortures of the prolonged dilatation, the uncertainty of removal of the stone, and the length of the convalescence in those who did not succumb, it is easy to imagine what excitement a more successful operation would arouse. The new operator was Frère Jacques.

"Within the hospital walls, the accepted home of science, might be witnessed an operator struggling with the stone, turning his forceps, twisting his body, fixing his sturdy feet against the operating table, then wiping the sweat from his brow, amidst the cries of the patient, and the pale and haggard looks of the spectators, whilst outside, Frère Jacques, a mendicant friar, without hesitation or fear, was boldly plunging his knife into the bladder, and in a few minutes extracting the largest stone."

Frère Jacques first appeared in Paris in 1697, being then about forty years of age. He was habited like a Franciscan friar, but he wore shoes instead of sandals, and a hat instead of a cowl. He had every appearance of sanctity, simplicity, and charity, and practised all the severities of an ascetic life, subsisting merely on bread and soups, and accepting no other reward for his services than a few pence to mend his shoes, and to keep his instruments in repair. His name was Jacques Beaulieu, and he was born near Besançon. His early life was spent in an almshouse. He claimed to be inspired, and this claim found ready acceptance on the part of many adherents. There seems to be no doubt, however, that he learned his art from a certain quack named Pauloni, to whom he was assistant

for a period of six years. His original method was as follows. Having introduced into the bladder a sound without a groove, he drove a long dagger-like knife into the skin near the ischium, directing the point of the knife so that it would touch the sound in the bladder. This incision was then enlarged upwards by cutting freely upon the sound until he had made a very large opening into the bladder. He then passed his finger into the wound, followed this with what he called his conductors, and then with his forceps extracted the stone without any dilatation of the wound, even though the stone was as large as an egg. The external wound corresponded to our lateral lithotomy, but the wound in the bladder in this his original operation was made behind the prostate.

When he first arrived in Paris, he was grieved to find that the surgeons would not allow him to operate in the hospitals, but through his influence with a canon of Notre Dame he was introduced to the first President of the Parliament of Paris, and he was allowed to remove a stone from the bladder of a cadaver, in the Hôtel Dieu.

Mery, a surgeon of that institution, prepared a report of this trial, and speaks on this occasion in the highest terms of the operation; but such was the jealousy which Frère Jacques aroused among the lithotomists of Paris, that further and more severe trials were demanded, and dissections proving the dangers of the operation, and harangues proving the incapacity of the operator, followed the first encomiums of his talents. He was made to operate on the body of both a boy and a woman. In the boy he almost entirely separated the urethra from the bladder, and in the woman he wounded the vagina, and cut the bladder from the urethra right up to the ureter. These were sad mistakes, and extremely unfortunate for Frère Jacques. They must be attributed, however, to his ignorance of anatomy rather than to the imperfection of his method. The reaction was inevitable. He was so decried in Paris that he was forced to leave the city. He then went to Fontainebleau, where he was well received by the Court.

He introduced himself to Duchesne, who was delighted with his zeal, and who in turn brought him under the notice of Felix and Fagon, body surgeon and physician respectively to the King, Louis XIV.

They were all extremely anxious to see with what result he could operate on the living, and a shoemaker's boy offering himself at the opportune moment, Frère Jacques operated on him by order of the Court.

The operation was a complete success; daily bulletins of the patient's progress were issued by Duchesne, and at the end of three weeks the boy was seen walking the streets of the village, perfectly cured. The case excited so much interest in the court that it is reported the king observed, "This man cannot be neglected."

Secure now under the ægis of the king, he returned with the Court to Paris, where he cut at least a dozen patients for stone with such marked success that the President of the Parliament (de Harley) again requested that the surgeons of the Hôtel Dieu should furnish him with a decisive report of his operation.

On the 7th April 1698 the magistrates of the city, the physicians, surgeons, and managers of the Hôtel Dieu were assembled in the Archbishop's palace to discuss again whether Frère Jacques should be allowed or not to operate in the hospital.

Mery, who opened the debate, made a complete change of front; and though he stated that he would speak impartially, his speech, prompted by the malice and jealousy of his colleagues, was a record of all the accidents that had befallen the patients under Frère Jacques' care. But of the eight patients whose records he could produce all that he could really allege against the operator was one death in a boy, and an accidental wound of the vagina in another case.

At the conclusion of Mery's oration, Frère Jacques' friends, though acknowledging the facts detailed by Mery, attested to the great advance made by the new operation, and adduced

the splendid records of his success in the provinces, with the result that finally it was agreed that he should be allowed the opportunity of operating in the Hôtel-Dieu and in La Charité during the next few months, for spring, the usual season for lithotomy, had now arrived.

He now was operating under the searching gaze of the public; his demonstrations were packed with surgeons not only from Paris, but also from the surrounding towns. All were delighted with his daring, his boldness, and the ease of the extraction of the stone, though contemporaries speak of being struck with awe at the huge size of the incision, and of their horror at the length of time he kept the knife in the wound. In a few weeks he had operated on 62 patients. But it was not long before the surgeons had their revenge. The patients began to die. In one day at the Charité 7 patients were taken to the Salle des Morts, and of the whole of the 62 patients, 25 died. At first the deaths were ascribed to the poisoning of the wounds in the after dressings by the surgeons of La Charité, and it is to be regretted that Frère Jacques was sufficiently small-minded to acquiesce in this explanation. Although such a mortality seems to us unusually high, one must always remember that these were operations done in the pre-antiseptic days, when all operations had a high mortality; yet it showed a distinct improvement on the mortality by the apparatus major, but so unforeseen was it that again his popularity began to decline. He left Paris disheartened and disgraced for the second time.

In July 1698 he was in Orleans, in August at Aix-la Chapelle, a little later in Germany, and then back again to Amsterdam—everywhere received with the same enthusiasm as in his early days in Paris, and everywhere applauded for his dexterity and skill. He operated on many persons of distinction and merit, including the nobility, and he assumed on this journey the title of Lithotomist to His Most Christian Majesty, on the strength of the certificates he had received from the physicians of the Court.

Though exiled from Paris by his unsuccessful results, the surgeons of that city had been greatly impressed by his successes, and, with their knowledge of anatomy, were easily able to evade the accidents which had befallen Frère Jacques, and in the following year were actually operating by his method, though without acknowledging to whom they were indebted for their improvements. Maréchal, the chief lithotomist of France, was certainly doing Frère Jacques' operation in 1700.

Now, of all the doctors in Paris no one had been so much impressed by the excellency of Frère Jacques as M. Fagon, chief physician to the King. He followed with interest his peregrinations, and in the year 1700 recalled Frère Jacques back to Versailles, invited him to lodge at his own house, and persuaded him to go through a complete course of studies and dissections.

This deep interest in Frère Jacques was partly explained by the fact that M. Fagon himself suffered from stone, and he evidently wished that nothing should be left to chance when he became a patient.

All previous errors were corrected, and Frère Jacques improved his procedure by using a grooved staff instead of a solid sound, and cutting the prostate completely through instead of leaving it more or less intact.

So signal was the success of this teaching, that in Versailles, when he was again allowed to operate on the living, he cut 38 patients without a single death.

In a pamphlet which he published later, he speaks with gratitude of this great lesson in anatomy, and is said to have whispered on one occasion that he "had left off his rude method of operating and now used a grooved staff."

Honours were showered upon him by the Court; he was presented with testimonials testifying to his superior skill and courage; they bore witness to his disinterested conduct and to the perfect success of his new operation. He was now in the zenith of his popularity. But he was again to meet

with misfortune for the third time, and again his ill-luck was associated with Paris.

M. Fagon now decided to submit himself to operation, and with him another distinguished sufferer, the Maréchal de Lorges. Both proceeded with extreme caution: Fagon by drilling his pupil in anatomy, and the Maréchal de Lorges by securing for him a large number of cases for operation. In spite of the complete success of these trial operations, and even after Frère Jacques had sounded him for stone, M. Fagon hesitated and finally preferred to employ one of his colleagues. He recovered, while the Maréchal de Lorges, trusting in Frère Jacques, succumbed under his operation. It was an ironic stroke of fate. Frère Jacques left Paris, never to return. He spent the rest of his life in travelling in France, Germany, Switzerland, Italy, Austria, and Holland.

At Geneva he was received with acclamation, and was accorded the public thanks of both the greater and lesser councils: and at The Hague he was presented with his portrait and a set of golden sounds. Sometimes, however, as at Amsterdam, he was hounded out of the towns by the machinations of jealous surgeons, one of whom, Rau, who stole the operation he affected to condemn, is said to have dissected him out of Holland.

Wearied at length of travelling, and desirous of visiting his native country before he died, he finally left Rome, and never stopped until he reached his native town, Besançon, where of all his relations he only found some of his nephews alive. Having distributed among his poor relations the little money that remained to him, he passed the remainder of his days in Besançon, where he is said to have died at the age of seventy.

The medal that had been presented to him by the city of Amsterdam was never found, and the golden sounds he was known to have melted down before his death.

Although for the next fifty years the older operation was still performed in France, yet there appears to be no doubt

that Frère Jacques' operation was in essence the operation of lateral lithotomy which remained the usual operation for stone during the next two hundred years. Forgotten in France, it was secretly performed in Holland by Rau, and from him was introduced to the English surgeons by Cheselden.

This operation has now practically fallen into disuse, and for surgeons can only possess historic interest. Still, Frère Jacques presents such an extraordinary figure among medical worthies, his character was so variously interpreted by his contemporaries, that if his story does not point a moral perhaps it does not ill adorn a chapter in surgery.

Liverpool med chir J., (

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